NASA Glenn Success Stories

# Hybrid Power Management (GRC) Program Supports Ice Rink Resurfacing

*JME, Inc.* *Shaker Heights, OH*

## TECHNOLOGY

Hybrid Power Management (HPM) is the art of combining diverse power devices in an optimal configuration for space and terrestrial applications. One unique power device is the ultracapacitor. It is rugged, reliable, and maintenance free. It also has an extremely long life and excellent low temperature performance. These characteristics make this technology ideal for ice resurfacing.


***Electric ice resurfacing machines can be greatly improved through the application of Hybrid Power Management (HPM).***

## COMMERCIAL APPLICATION

- **Transportation Industry**; applications for automobiles, delivery vehicles, municipal waste trucks, school buses, and shuttle buses
- **Power Generation**; applications for alleviating power surges
- **Biotechnology**; power systems for wheelchairs, hearing aids
- **Space Power Systems**; ultracapacitors for deep space missions

## SOCIAL / ECONOMIC BENEFIT

- HPM has the potential to significantly alleviate global energy concerns, improve the environment, and stimulate the economy.

## NASA APPLICATIONS

- HPM provides reliable, long life energy storage systems essential for deep space missions. HPM also provides safe energy storage for drop tower research.

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